

AUDIT REPORT

2023



**ANALYTIX
AUDIT**

Security Assessment **GOAT Tools Token**

June 8, 2023

Audit Status: Pass

Audit Edition: Advance
















Risk Analysis

Classifications of Manual Risk Results

Classification	Description
 Critical	Danger or Potential Problems.
 Major	Be Careful
 Minor	Pass, Not-Detected or Safe Item.
 Informational	Function Detected

Manual Code Review Risk Results

Contract Priviledge	Description
 Can mint?	Pass
 Edit taxes over 25%?	Pass
 Max Tx?	Pass - Owner can set maxTx with reasonable limits.
 Max Wallet?	Pass - Owner can set maxTx with reasonable limits.
 Has to enable trading?	Project owner has to enable trading
 Modify Tax	Pass
 Can blacklist?	Pass
 Is Honeypot?	Liquidity has not been added
 Trading Cooldown	Detected
 Can Pause Trade?	Owner can pause trading
 Pause Transfer?	Owner can pause trading



Contract Priviledge	Description
● Is Proxy??	Not Detected
● Is Anti Whale?	Not Detected
● Is Anti Bot?	Not Detected
● Is Blacklist?	Not Detected
● Blacklist Check	Pass
● is Whitelist?	Not Detected
● Buy Tax	9
● Sell Tax	9
● Can Take Ownership?	Not Detected
● Hidden Owner?	Not Detected
● Owner	0x2B0D88733DD993Ef6aC909f6AC54A03753F842Eb
● Self Destruct?	Not Detected
● Other?	Not Detected
● Other?	Not Detected
● Holders	1
● Auditor Confidence	Medium

The following quick summary it's added to the project overview; however, there are more details about the audit and its results. Please read every detail.





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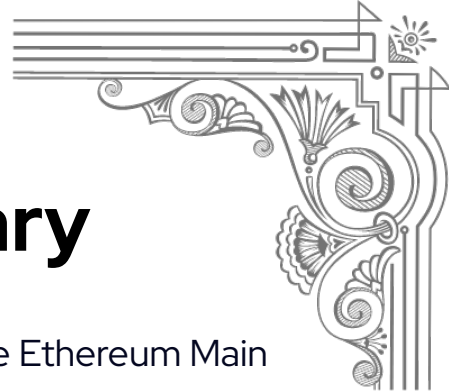
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Assessment Summary

This report has been prepared for GOAT Tools Token on the Ethereum Main Network network. AnalytixAudit provides both client-centered and user-centered examination of the smart contracts and their current status when applicable. This report represents the security assessment made to find issues and vulnerabilities on the source code along with the current liquidity and token holder statistics of the protocol.

A comprehensive examination has been performed, utilizing Cross Referencing, Static Analysis, In-House Security Tools, and line-by-line Manual Review.

The auditing process pays special attention to the following considerations:

- Testing the smart contracts against both common and uncommon attack vectors.
- Inspecting liquidity and holders statistics to inform the current status to both users and client when applicable.
- Assessing the codebase to ensure compliance with current best practices and industry standards.
- Verifying contract functions that allow trusted and/or untrusted actors to mint, lock, pause, and transfer assets.
- Cross referencing contract structure and implementation against similar smart contracts produced by industry leaders
- Thorough line-by-line manual review of the entire codebase by industry experts.





Project Overview

Token Summary

Parameter	Result
Address	0x1cE01481E97dA4806AD8A6c212D24EC9DC481432
Name	GOAT Tools
Token Tracker	GOAT Tools (PLUG)
Decimals	18
Supply	100,000,000
Platform	Ethereum Main Network
compiler	v0.8.9+commit.e5eed63a
Contract Name	PLUG
Optimization	No
LicenseType	MIT
Language	Solidity
Codebase	https://etherscan.io/address/0x1cE01481E97dA4806AD8A6c212D24EC9DC481432#code
Payment Tx	Corporate

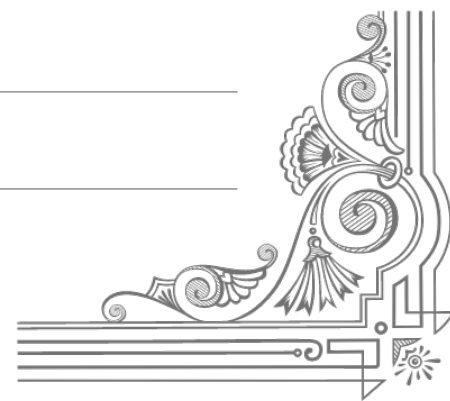




Project Overview

Simulation Summary

Parameter	Result
Transfer From Owner	Pass
Transfer From Holder	Pass
Add Liquidity	Pass
RemoveLiquidity	Pass
Buy from Owner	Pass
Buy from Holder	Pass
Sale from Owner	Pass
Sale from Holder	Pass
Remove Liquidity	Pass
SwapAndLiquify	Pass
SwapAndSale w/Fee	Pass
SwapAndSale TX	
SwapAndSaleNoFee	Pass
SwapAndSale No/Fee TX	
ExcludeFromFees	Pass
LaunchPad	PinkSale





Parameter	Result
Pool Creation	Pass
Pool Creation TX	
Pool Finalize	Pass
Pool Finalize TX	
Enable	Pass

The following quick summary it's added to the project overview; however, there are more details about the audit and its results. Please read every detail.





**Main Contract Assessed
Contract Name**

Name	Contract	Live
GOAT Tools	0x1cE01481E97dA4806AD8A6c212D24EC9DC481432	Yes

TestNet Contract was Not Assessed

Solidity Code Provided

SolID	File Sha-1	FileName
PLUG	9eb45379dccf041954c13960d4e559933834c11	PLUG.sol
PLUG		
PLUG		
PLUG		





KYC Information

The Project Owners of GOAT Tools is not KYC.

KYC Information Notes:

Auditor Notes: No info founde

Project Owner Notes:





Smart Contract Vulnerability Checks

The Smart Contract Weakness Classification Registry (SWC Registry) is an implementation of the weakness classification scheme proposed in EIP-1470. It is loosely aligned to the terminologies and structure used in the Common Weakness Enumeration (CWE) while overlaying a wide range of weakness variants that are specific to smart contracts.

ID	Severity	Name	File	location
SWC-100	Pass	Function Default Visibility	PLUG.sol	L: 0 C: 0
SWC-101	Pass	Integer Overflow and Underflow.	PLUG.sol	L: 0 C: 0
SWC-102	Pass	Outdated Compiler Version file.	PLUG.sol	L: 0 C: 0
SWC-103	Pass	A floating pragma is set.	PLUG.sol	L: 0 C: 0
SWC-104	Pass	Unchecked Call Return Value.	PLUG.sol	L: 0 C: 0
SWC-105	Pass	Unprotected Ether Withdrawal.	PLUG.sol	L: 0 C: 0
SWC-106	Pass	Unprotected SELFDESTRUCT Instruction	PLUG.sol	L: 0 C: 0
SWC-107	Pass	Read of persistent state following external call.	PLUG.sol	L: 0 C: 0
SWC-108	Pass	State variable visibility is not set..	PLUG.sol	L: 0 C: 0
SWC-109	Pass	Uninitialized Storage Pointer.	PLUG.sol	L: 0 C: 0
SWC-110	Pass	Assert Violation.	PLUG.sol	L: 0 C: 0



ID	Severity	Name	File	location
SWC-111	Pass	Use of Deprecated Solidity Functions.	PLUG.sol	L: 0 C: 0
SWC-112	Pass	Delegate Call to Untrusted Callee.	PLUG.sol	L: 0 C: 0
SWC-113	Low	Multiple calls are executed in the same transaction.	PLUG.sol	L: 1120 C: 0
SWC-114	Pass	Transaction Order Dependence.	PLUG.sol	L: 0 C: 0
SWC-115	Pass	Authorization through tx.origin.	PLUG.sol	L: 0 C: 0
SWC-116	Pass	A control flow decision is made based on The block.timestamp environment variable.	PLUG.sol	L: 0 C: 0
SWC-117	Pass	Signature Malleability.	PLUG.sol	L: 0 C: 0
SWC-118	Pass	Incorrect Constructor Name.	PLUG.sol	L: 0 C: 0
SWC-119	Pass	Shadowing State Variables.	PLUG.sol	L: 0 C: 0
SWC-120	Pass	Potential use of block.number as source of randommness.	PLUG.sol	L: 0 C: 0
SWC-121	Pass	Missing Protection against Signature Replay Attacks.	PLUG.sol	L: 0 C: 0
SWC-122	Pass	Lack of Proper Signature Verification.	PLUG.sol	L: 0 C: 0
SWC-123	Pass	Requirement Violation.	PLUG.sol	L: 0 C: 0
SWC-124	Pass	Write to Arbitrary Storage Location.	PLUG.sol	L: 0 C: 0
SWC-125	Pass	Incorrect Inheritance Order.	PLUG.sol	L: 0 C: 0



ID	Severity	Name	File	location
SWC-126	Pass	Insufficient Gas Griefing.	PLUG.sol	L: 0 C: 0
SWC-127	Pass	Arbitrary Jump with Function Type Variable.	PLUG.sol	L: 0 C: 0
SWC-128	Pass	DoS With Block Gas Limit.	PLUG.sol	L: 0 C: 0
SWC-129	Pass	Typographical Error.	PLUG.sol	L: 0 C: 0
SWC-130	Pass	Right-To-Left-Override control character (U +202E).	PLUG.sol	L: 0 C: 0
SWC-131	Pass	Presence of unused variables.	PLUG.sol	L: 0 C: 0
SWC-132	Pass	Unexpected Ether balance.	PLUG.sol	L: 0 C: 0
SWC-133	Pass	Hash Collisions with Multiple Variable Length Arguments.	PLUG.sol	L: 0 C: 0
SWC-134	Pass	Message call with hardcoded gas amount.	PLUG.sol	L: 0 C: 0
SWC-135	Pass	Code With No Effects (Irrelevant/Dead Code).	PLUG.sol	L: 0 C: 0
SWC-136	Pass	Unencrypted Private Data On-Chain.	PLUG.sol	L: 0 C: 0

We scan the contract for additional security issues using MYTHX and industry-standard security scanning tools.



Smart Contract Vulnerability Details

SWC-113 - DoS with Failed Call

CWE-703: Improper Check or Handling of Exceptional Conditions

Description:

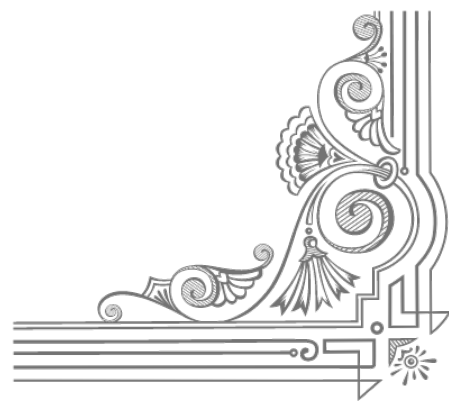
External calls can fail accidentally or deliberately, which can cause a DoS condition in the contract. To minimize the damage caused by such failures, it is better to isolate each external call into its own transaction that can be initiated by the recipient of the call. This is especially relevant for payments, where it is better to let users withdraw funds rather than push funds to them automatically (this also reduces the chance of problems with the gas limit).

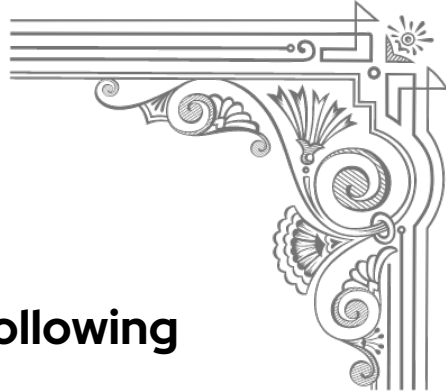
Remediation:

It is recommended to follow call best practices: Avoid combining multiple calls in a single transaction, especially when calls are executed as part of a loop. Always assume that external calls can fail. Implement the contract logic to handle failed calls

References:

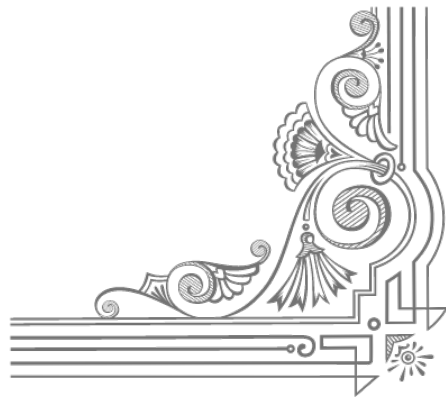
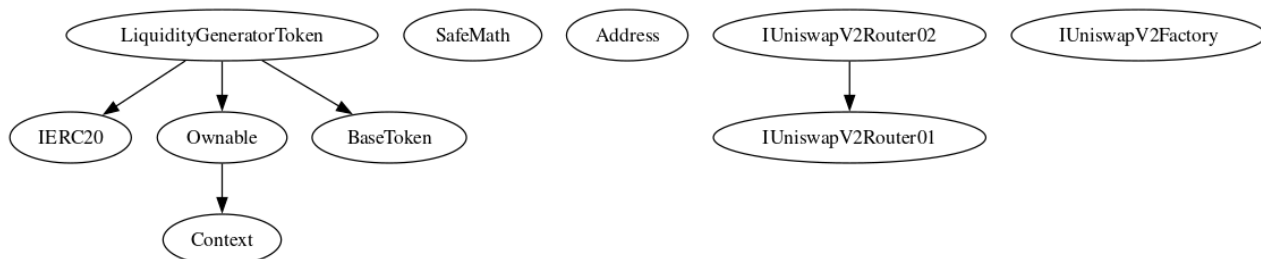
ConsenSys Smart Contract Best Practices





Inheritance

The contract for GOAT Tools has the following inheritance structure.



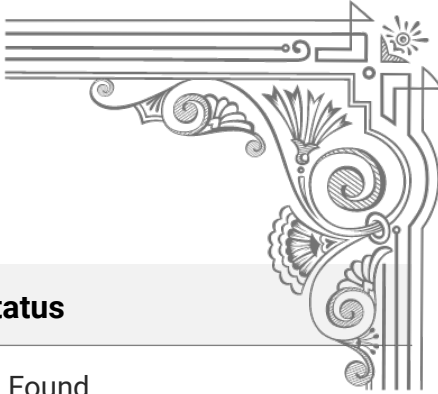


Smart Contract Advance Checks

ID	Severity	Name	Result	Status
PLUG-01	Minor	Potential Sandwich Attacks.	Pass	Not-Found
PLUG-02	Minor	Function Visibility Optimization	Pass	Not-Found
PLUG-03	Minor	Lack of Input Validation.	Pass	Not-Found
PLUG-04	Major	Centralized Risk In addLiquidity.	Pass	Not-Found
PLUG-05	Minor	Missing Event Emission.	Pass	Not-Found
PLUG-06	Minor	Conformance with Solidity Naming Conventions.	Pass	Not-Found
PLUG-07	Minor	State Variables could be Declared Constant.	Pass	Not-Found
PLUG-08	Minor	Dead Code Elimination.	Pass	Not-Found
PLUG-09	Major	Third Party Dependencies.	Pass	Not-Found
PLUG-10	Major	Initial Token Distribution.	Pass	Not-Found
PLUG-11	Major	Complexity on the tax calculations.	Pass	Not-Found
PLUG-12	Major	Centralization Risks In The X Role	Pass	Not-Found
PLUG-13	Informational	Extra Gas Cost For User..	Pass	Not-Found
PLUG-14	Medium	Unnecessary Use Of SafeMath	Fail	Found
PLUG-15	Medium	Symbol Length Limitation due to Solidity Naming Standards.	Pass	Not-Found



ID	Severity	Name	Result	Status
PLUG-16	Medium	Invalid collection of Taxes during Transfer.	Pass	Not-Found
PLUG-17	Informational	Conformance to numeric notation best practice.	Pass	Not-Found
PLUG-18	Informational	Enable Trade and Exclude Exist to create a whitelist.	Pass	Not-found



PLUG-14 | Unnecessary Use Of SafeMath

Category	Severity	Location	Status
Logical Issue	<div><div></div>Medium</div>	PLUG.sol: 454,9	<div><div></div>Found</div>

Description

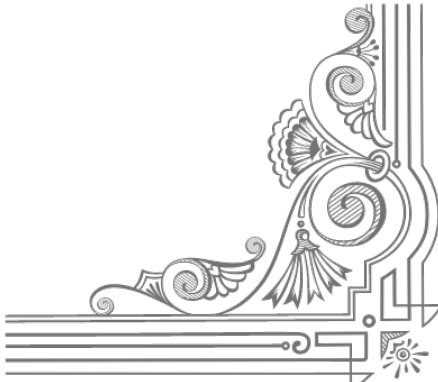
The SafeMath library is used unnecessarily. With Solidity compiler versions 0.8.0 or newer, arithmetic operations will automatically revert in case of integer overflow or underflow.

```
library SafeMath {  
    An implementation of SafeMath library is found.  
    using SafeMath for uint256;  
    SafeMath library is used for uint256 type in contract.
```

Remediation

We advise removing the usage of SafeMath library and using the built-in arithmetic operations provided by the Solidity programming language

Project Action





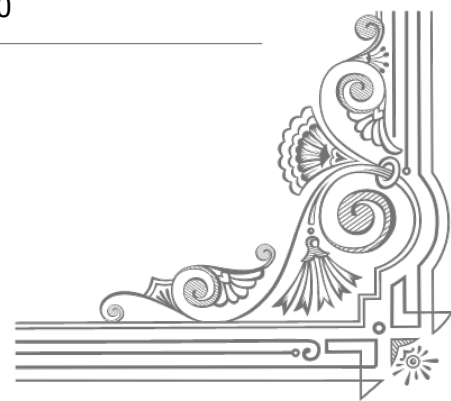
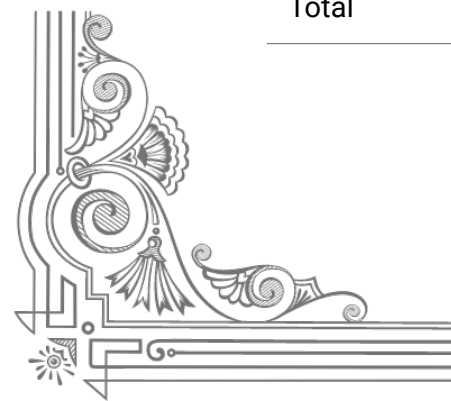
Technical Findings Summary

Classification of Risk

Severity	Description
● Critical	Risks are those that impact the safe functioning of a platform and must be addressed before launch. Users should not invest in any project with outstanding critical risks.
● Major	Risks can include centralization issues and logical errors. Under specific circumstances, these major risks can lead to loss of funds and/or control of the project.
● Medium	Risks may not pose a direct risk to users' funds, but they can affect the overall functioning of a platform
● Minor	Risks can be any of the above but on a smaller scale. They generally do not compromise the overall integrity of the Project, but they may be less efficient than other solutions.
● Informational	Errors are often recommended to improve the code's style or certain operations to fall within industry best practices. They usually do not affect the overall functioning of the code.

Findings

Severity	Found	Pending	Resolved
● Critical	2	2	0
● Major	1	1	0
● Medium	0	0	0
● Minor	0	0	0
● Informational	0	0	0
Total	3	3	0





Social Media Checks

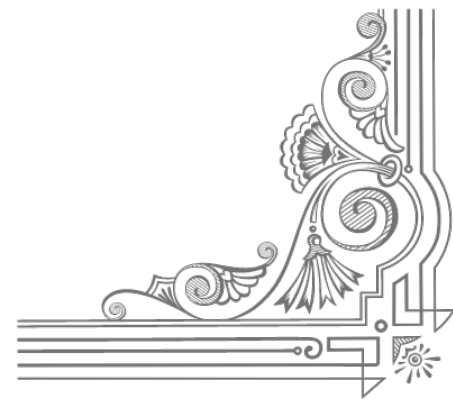
Social Media	URL	Result
Twitter	https://twitter.com/GOAT__Tools	Pass
Other		Fail
Website	https://goattoolstoken.com	Pass
Telegram	https://t.me/GOAT__Tools	Pass

We recommend to have 3 or more social media sources including a completed working websites.

Social Media Information Notes:

Auditor Notes: undefined

Project Owner Notes:





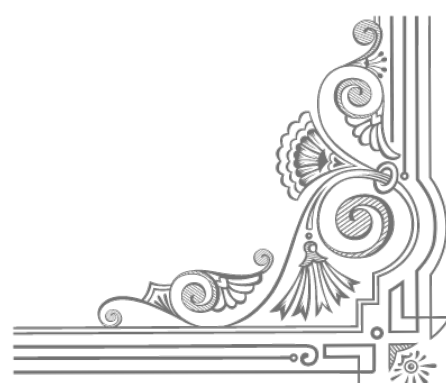
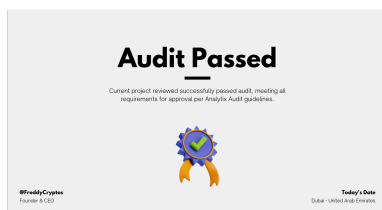
Assessment Results

Score Results

Review	Score
Overall Score	83/100
Auditor Score	90/100
Review by Section	Score
Manual Scan Score	38/53
SWC Scan Score	36 /37
Advance Check Score	9 /19

The Following Score System Has been Added to this page to help understand the value of the audit, the maximum score is 100, however to attain that value the project must pass and provide all the data needed for the assessment. Our Passing Score has been changed to 80 Points, if a project does not attain 80% is an automatic failure. Read our notes and final assessment below.

Audit Passed





Assessment Results

Important Notes:

- Issues or vulnerabilities were found.
- Always DYOR on the project itself.

Auditor Score =90
Audit Passed

Audit Passed

Current project reviewed successfully passed audit, meeting all requirements for approval per Analytix Audit guidelines.



@FreddyCryptos
Founder & CEO

Today's Date
Dubai - United Arab Emirates



Appendix

Finding Categories

Centralization / Privilege

Centralization / Privilege findings refer to either feature logic or implementation of components that act against the nature of decentralization, such as explicit ownership or specialized access roles in combination with a mechanism to relocate funds.

Gas Optimization

Gas Optimization findings do not affect the functionality of the code but generate different, more optimal EVM opcodes resulting in a reduction on the total gas cost of a transaction.

Logical Issue

Logical Issue findings detail a fault in the logic of the linked code, such as an incorrect notion on how block.timestamp works.

Control Flow

Control Flow findings concern the access control imposed on functions, such as owner-only functions being invoke-able by anyone under certain circumstances.

Volatile Code

Volatile Code findings refer to segments of code that behave unexpectedly on certain edge cases that may result in a vulnerability.

Coding Style

Coding Style findings usually do not affect the generated byte-code but rather comment on how to make the codebase more legible and, as a result, easily maintainable.

Inconsistency

Inconsistency findings refer to functions that should seemingly behave similarly yet contain different code, such as a constructor assignment imposing different requirements on the input variables than a setter function.

Coding Best Practices

ERC 20 Coding Standards are a set of rules that each developer should follow to ensure the code meets a set of criteria and is readable by all the developers.





Disclaimer

AnalytixAudit has conducted an independent security assessment to verify the integrity of and highlight any vulnerabilities or errors, intentional or unintentional, that may be present in the reviewed code for the scope of this assessment. This report does not constitute agreement, acceptance, or advocacy for the Project, and users relying on this report should not consider this as having any merit for financial advice in any shape, form, or nature. The contracts audited do not account for any economic developments that the Project in question may pursue, and the veracity of the findings thus presented in this report relate solely to the proficiency, competence, aptitude, and discretion of our independent auditors, who make no guarantees nor assurance that the contracts are entirely free of exploits, bugs, vulnerabilities or deprecation of technologies.

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